

**IN THE CLAIMS:**

**Please amend the claims as follows.**

1. (Currently amended) A power system comprising:  
a fuel preconditioner comprising a heat source configured to heat the fuel so as to pyrolyze the fuel, the fuel preconditioner being adapted to convert a fuel to at least one conditioned fuel;  
a pulse detonation combustor adapted to receive the conditioned fuel and a primary oxidizer and to detonate a mixture comprising the conditioned fuel and the primary oxidizer and exhaust a plurality of detonation products; and  
a turbine positioned downstream from said pulse detonation combustor, said turbine being in flow communication with said pulse detonation combustor.
2. (Canceled)
3. (Currently amended) The power system of Claim 1 ~~2~~, wherein said fuel preconditioner further comprises a catalyst adapted to enhance the pyrolysis of the fuel.
4. (Original) The power system of Claim 1, wherein said fuel preconditioner comprises a plasma source configured to pyrolyze the fuel.
5. (Original) The power system of Claim 1, wherein said fuel preconditioner comprises a catalyst adapted to pyrolyze the fuel.
6. (Original) The power system of Claim 1, wherein the fuel comprises a hydrocarbon fuel.
7. (Original) The power system of Claim 1, wherein the fuel is selected from the group consisting of natural gas and distillate liquids fuels.
8. (Original) The power system of Claim 1, wherein said pulse detonation combustor is further adapted to receive a primary fuel and to detonate a mixture comprising the conditioned fuel, the primary fuel and the primary oxidizer and exhaust a plurality of detonation products.

9. (Original) The power system of Claim 8, wherein the primary fuel comprises a hydrocarbon fuel.

10. (Original) The power system of Claim 8, wherein the primary fuel is selected from the group consisting of natural gas and distillate liquids fuels.

11. (Original) The power system of Claim 1, further comprising a compressor configured to supply air to at least one of said fuel preconditioner, said pulse detonation combustor, and said turbine.

12-45. (Cancelled)